

TABLE OF CONTENTS

1. BACKGROUND

1.1 WHOOPING CRANE EASTERN PARTNERSHIP

2. INTRODUCTION AND PURPOSE

3. HISTORY AND CURRENT DISTRIBUTION

3.1 WISCONSIN HISTORIC RANGE

3.2 ABUNDANCE AND CURRENT DISTRIBUTION

3.2.1 Aransas-Wood Buffalo Population

3.2.2 Florida Non-migratory Population

3.2.3 Eastern Migratory Population

3.2.4 Captive Cranes

4. RECOVERY GOAL AND STRATEGY

4.1 LEGAL ASPECTS OF RECOVERY

4.1.1 Protections

4.1.2 Geographic Scope

5. WHOOPING CRANE BIOLOGY AND ECOLOGY

5.1 SPECIES DESCRIPTION

5.2 MOLT

5.3 LIFE SPAN

5.4 FOOD HABITS

5.5 BREEDING ECOLOGY

5.6 MIGRATORY BEHAVIOR

5.6.1 Spring

5.6.2 Autumn

5.7 HABITAT USE

5.7.1 Historical Migration Habitat

5.7.2 Aransas-Wood Buffalo Population Migration Habitat

5.7.3 Aransas-Wood Buffalo Population Summer (breeding) Habitat

5.7.4 Aransas-Wood Buffalo Population Winter Habitat

5.7.5 Florida Population Habitat

5.7.6 Eastern Population Migration Habitat

5.7.7 Eastern Migratory Population Summer (breeding) Habitat

5.7.7.1 Necedah National Wildlife Refuge

5.7.7.2 Meadow Valley State Wildlife Area

5.7.7.3 Cranberry Beds and Reservoirs

5.7.7.4 Mill Bluff State Park

5.7.7.5 Horicon National Wildlife Refuge

5.7.7.6 Food Preferences

5.7.7.7 Nesting

5.7.8 Eastern Migratory Population Winter Habitat

5.7.8.1 Coastal Salt Marsh Habitat

5.7.8.2 Florida Inland Habitat

5.7.8.3 Habitat in States Other than Florida

5.8 POPULATION DYNAMICS IN THE ARANSAS-WOOD BUFFALO POPULATION

6. MANAGEMENT AND MONITORING

- 6.1 GOAL
- 6.2 POPULATION MANAGEMENT
- 6.3 GENETIC DIVERSITY
 - 6.3.1 Eastern Population Demographics
 - 6.3.2 Eastern Population Genetics
 - 6.3.3 Population Recommendations
- 6.4 DATA MANAGEMENT
 - 6.4.1 Database Goals and Objectives
- 6.5 MONITORING STRATEGIES
 - 6.5.1 Radio Transmitters
 - 6.5.2 Aerial Tracking
 - 6.5.3 Satellite-monitored Radio Transmitters
- 6.6 BIRD INTERVENTIONS
 - 6.6.1 Relocation Options
 - 6.6.2 Methods
 - 6.6.3 Nesting Interventions
- 6.7 HEALTH RISKS AND MORTALITY
 - 6.7.1 Diseases
 - 6.7.2 Contaminants
 - 6.7.3 Traumatic Injury and Death
 - 6.7.4 Collisions with Power Lines, Towers, Turbines and Other Structures
- 6.8 MANAGING PUBLIC AND PRIVATE LANDS
 - 6.8.1 Role of Private Land Management
 - 6.8.2 Property Rights
 - 6.8.3 Agriculture
 - 6.8.4 Invasive Species Control
 - 6.8.5 Water Level Management
 - 6.8.6 Airport Safety
- 6.9 NEST SITE AND TERRITORY MANAGEMENT
 - 6.9.1 Buffer Zones
 - 6.9.2 Timing Activities to Minimize Human Disturbance
 - 6.9.3 Land Acquisition and Habitat Protection Opportunities

7. COMPATABILITY WITH EXISTING WILDLIFE MANAGEMENT PRACTICES

- 7.1 HUNTING
- 7.2 TRAPPING OPTIONS TO CONTROL PREDATION

8. EDUCATION PROGRAMS AND OUTREACH EFFORTS

- 8.1 PARTNERSHIPS
- 8.2 DEVELOPING EDUCATIONAL AND OUTREACH MATERIALS
- 8.3 SHARING INFORMATION
- 8.4 ECOTOURISM
- 8.5 ECONOMIC BENEFITS

9. LEGAL ENFORCEMENT

- 9.1 STATE LAWS
 - 9.1.1 Accidental Shooting
 - 9.1.2 Intentional Shooting
 - 9.1.3 Interstate Transportation

9.2 FEDERAL LAWS

9.2.1 Accidental Shooting

9.2.2 Intentional Shooting

9.3 VIOLATION PROTOCOLS AND SPECIMEN MANAGEMENT

10. PROJECT NEEDS

10.1 RESEARCH

10.1.1 Nest Predation or Abandonment

10.1.2 Dispersal and Movements

10.1.3 GIS Analysis of Habitat and Potential Population in Wisconsin

10.1.4 Nesting Ecology

10.1.5 Habitat Use

10.1.6 Health Issues

10.1.7 Food Habits

10.1.8 Potential Utility Line Collisions

10.2 MONITORING PROTOCOL

10.3 EQUIPMENT

11. LITERATURE CITED

12. APPENDICES

APPENDIX 1: Banding, Marking, Radio and Satellite Transmitters

APPENDIX 2: Eastern Migratory Population Identification

APPENDIX 3: Eastern Migratory Population Genealogy

APPENDIX 4: Capture and Safe Handling of Whooping Cranes to Avoid Capture-Related Stress and Injury

APPENDIX 5: Health Protocols

APPENDIX 6: GIS Representation of Whooping Crane Presence in Wisconsin and 2002-2005 Location by Wisconsin County

APPENDIX 7: Wisconsin DNR Electronic Data Monitoring Form and Instructions

APPENDIX 8: Response Protocols

1. Private Land Issues

2. Citizen Involvement

3. Law Violation

4. Dead Crane Data Sheet

ABBREVIATION GLOSSARY

Adm. Code

Administrative code

ANWR	Aransas National Wildlife Refuge
AWBP	Aransas Wood Buffalo population
CRP	Conservation Reserve Program
CWS	Canadian Wildlife Service
DVC	disseminated visceral coccidiosis
EEE	eastern equine encephalomyelitis
EMP	eastern migratory population
FESA	Federal Endangered Species Act
FP	Florida population
GIS	Geographic Information System
ICF	International Crane Foundation
IWCRT	International Whooping Crane Recovery Team
NEP	nonessential experimental population
NRCS	Natural Resource Conservation Service
NWR	National Wildlife Refuge
plan	Wisconsin Whooping Crane Management Plan
PTT	platform transmitter terminal
SARA	Species at Risk Act
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VHF	very high frequency
WBNP	Wood Buffalo National Park
WCEP	Whooping Crane Eastern Partnership
WI DNR	Wisconsin Department of Natural Resources
Wis. Stats.	Wisconsin statutes
WS	Wildlife Services
WRP	Wetlands Reserve Program